

## CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

1           1.       A sequential signal selection system comprising:  
 2                   a processor;  
 3                   a memory device coupled to the processor;  
 4                   at least one radio/transceiver coupled to the processor; and  
 5                   an analog pre-selection network coupled to the at least one  
 6 radio/transceiver.

1           2.       The sequential signal selection system of claim 1, wherein the analog  
 2 pre-selection network comprises:  
 3                   a beam forming network;  
 4                   an antenna array coupled to the beam forming network;  
 5                   a switching network coupled to the beam forming network; and  
 6                   an analog pre-select coupled to the switching network, and to the beam  
 7 forming network.

1           3.       The sequential signal selection system of claim 1, wherein the analog  
 2 pre-selection network comprises:  
 3                   a first analog pre-selection sub-network;  
 4                   a second analog pre-selection sub-network; and  
 5                   a third analog pre-selection sub-network coupled to the first analog pre-  
 6 selection sub-network, and to the second analog pre-selection sub-network.

1           4.       The sequential signal selection system of claim 3, wherein the third  
 2 analog pre-selection sub-network comprises:  
 3                   a third switching network coupled to the at least one radio/transceiver;  
 4 and  
 5                   a third analog pre-select coupled to the third switching network.

1           5.     The sequential signal selection system of claim 4, wherein the second  
2 analog pre-selection sub-network comprises:

3                     a second switching network coupled to the third switching network;  
4                     a second beamforming network coupled to the second switching  
5 network, the second beam forming network coupled to a second antenna array;  
6                     and  
7                     a second analog pre-select coupled to the second beam forming network,  
8 to the second switching network, and to the processor.

1           6.     The sequential signal selection system of claim 5, wherein the first  
2 analog pre-selection sub-network comprises:

3                     a first switching network coupled to the third switching network;  
4                     a first beam forming network coupled to the first switching network, the  
5 first beam forming network coupled to a first antenna array; and  
6                     a first analog pre-select coupled to the first beam forming network, to  
7 the first switching network, and to the processor.

1           7.     The sequential signal selection system of claim 4, wherein the second  
2 analog pre-selection sub-network comprises:

3                     a second switching network coupled to the third switching network, the  
4 second switching network coupled to a second antenna array; and  
5                     a second analog pre-select coupled to the second antenna array, and to  
6 the second switching network.

1           8.     The sequential signal selection system of claim 7, wherein the second  
2 analog pre-select is coupled to the processor.

1           9.     The sequential signal selection system of claim 8, wherein the first  
2 analog pre-selection sub-network comprises:

3                 a first switching network coupled to the third switching network; the  
4 first switching network coupled to a first antenna array; and

5                 a first analog pre-select coupled to the first antenna array, to the first  
6 switching network, and to the processor.

1           10.    The sequential signal selection system of claim 2, wherein the analog  
2 pre-select comprises:

3                 a band pass filter, the band pass filter coupled to the beam forming  
4 network;

5                 an amplifier coupled to the band pass filter;

6                 a detector coupled to the amplifier; and

7                 a sorting device coupled to the detector, to the processor, and to the  
8 switching network.

1           11.    The sequential signal selection system of claim 2, wherein the analog  
2 pre-select comprises:

3                 a band pass filter coupled to the beam forming network;

4                 an amplifier coupled to the band pass filter;

5                 an analog correlation receiver coupled to the amplifier; and

6                 a sorting device coupled to the analog correlation receiver, to the  
7 processor, and to the switching network.

1           12.    The sequential signal selection system of claim 2, wherein the analog  
2 pre-select comprises:

3                 a band pass filter, the band pass filter coupled to the beam forming  
4 network;

5                 an amplifier coupled to the band pass filter;

6                 a detector coupled to the amplifier;

7                 a modulated frequency sorter coupled to the detector; and

8                 a sorting device coupled to the modulated frequency sorter, to the  
9 switching network, and to the processor.

1           13.    A sequential signal selection method, comprising the steps of:  
 2                    pre-selecting at least two signals from a set of signals based on a pre-  
 3           selection method; and  
 4                    selecting at least one signal from the at least two signals based on a  
 5           selection method.

1           14.    The sequential signal selection method of claim 13, wherein the pre-  
 2           selection method is a receive signal strength indicator method.

1           15.    The sequential signal selection method of claim 13, wherein the pre-  
 2           selection method comprises the steps of:  
 3                    filtering the set of signals;  
 4                    amplifying the set of signals;  
 5                    rectifying the set of signals; and  
 6                    sorting the set of signals to obtain the at least two signals.

1           16.    The sequential signal selection method of claim 13, wherein the pre-  
 2           selection method comprises the steps of:  
 3                    filtering the set of signals;  
 4                    amplifying the set of signals;  
 5                    comparing a code of each signal in the set of signals to a pre-determined  
 6           code; and  
 7                    sorting the set of signals to obtain the at least two signals.

1           17.    The sequential signal selection method of claim 13, wherein the pre-  
 2           selection method comprises the steps of:  
 3                    filtering the set of signals;  
 4                    amplifying the set of signals;  
 5                    comparing frequency of envelope of each signal in the set of signals to a  
 6           pre-determined frequency; and  
 7                    sorting the set of signals to obtain the at least two signals.

1           18.    The sequential signal selection method of claim 13, wherein the set of  
2 signals comprises a set of radio frequency signals, a set of acoustic signals, a set of  
3 optical signals, and a set of infrared signals.

1           19.    The sequential signal selection method of claim 13, wherein the  
2 selection method comprises the steps of:

3                    comparing the at least two signals to a threshold; and

4                    sorting the at least two signals to obtain the at least one signal, wherein  
5 the at least two signals meet the threshold.

1           20.    A sequential signal selection system, comprising:

2                    means for pre-selecting at least two signals from a set of signals based  
3 on a pre-selection method; and

4                    means for selecting at least one signal from the at least two signals based  
5 on a selection method.